

### CLAIMS

What is claimed is:

- 1 1. A method for dynamic adaptation of a system in accordance with a contract  
2 with criteria associated therewith, comprising the steps of:  
3 (a) governing an interaction between a plurality of components of the system  
4 utilizing the criteria of the contract;  
5 (b) determining whether the interaction between the components of the system  
6 meets the criteria of the contract; and  
7 (c) adapting the interaction between the components of the system upon the  
8 criteria of the contract not being met.
- 1 2. The method as recited in claim 1, wherein the interaction between the  
2 components of the system is adapted by adjusting the contract.
- 1 3. The method as recited in claim 2, wherein the contract is adjusted by a  
2 method selected from the group consisting of deactivation of the contract,  
3 modification of the contract, deletion of the contract, and activation of a  
4 different contract.
- 1 4. The method as recited in claim 1, wherein the criteria of the contract include  
2 cost model criteria.
- 1 5. The method as recited in claim 4, wherein the cost model criteria is based on  
2 resource utilization.
- 1 6. The method as recited in claim 4, wherein the cost model criteria are based  
2 on performance.

- 1 7. The method as recited in claim 4, wherein the cost model criteria is based on  
2 service provisioning.
- 1 8. The method as recited in claim 1, wherein the interaction that is governed  
2 and adapted is security-related interaction.
- 1 9. The method as recited in claim 8, wherein the components include an  
2 intrusion detection module and an analysis module.
- 1 10. The method as recited in claim 1, wherein the interaction that is governed  
2 and adapted is performance-related interaction.
- 1 11. A computer program product for dynamic adaptation of a system in  
2 accordance with a contract with criteria associated therewith, comprising:  
3 (a) computer code for governing an interaction between a plurality of  
4 components of the system utilizing the criteria of the contract;  
5 (b) computer code for determining whether the interaction between the  
6 components of the system meets the criteria of the contract; and  
7 (c) computer code for adapting the interaction between the components of the  
8 system upon the criteria of the contract not being met.
- 1 12. The computer program product as recited in claim 11, wherein the interaction  
2 between the components of the system is adapted by adjusting the contract.
- 1 13. The computer program product as recited in claim 12, wherein the contract is  
2 adjusted by a method selected from the group consisting of deactivation of  
3 the contract, modification of the contract, deletion of the contract, and  
4 activation of a different contract.
- 1 14. The computer program product as recited in claim 11, wherein the criteria of  
2 the contract includes cost model criteria.

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